

1950

CALHOUN AND BATHTOWN REFUGES
NARRATIVE REPORT
JANUARY, FEBRUARY, MARCH, APRIL, 1950

I. GENERAL

A. Weather Conditions:

This was a warmer spring than 1949, with maximum temperatures higher in every month but February, which had 9° lower reading than 1949. The minimum temperatures were lower every month but January, which had minimum reading of 11° above, compared with 1° above in 1949. Rainfall for the period was .28 greater than last year, but January 1949 had 7.11" compared with 4.19" this year.

Relative readings are shown below:

Month	Year	Maximum	Minimum	Precipitation
January	1949	68	1	7.11
	1950	75	12	4.19
February	1949	65	16	3.24
	1950	56	10	3.59
March	1949	74	16	2.18
	1950	81	12	2.87
April	1949	67	35	.24
	1950	75	25	2.40
1949 Total				12.77
1950 Total				13.05

Precipitation was .28 greater than 1949 and 3.44 more than 1948.

B. Water Conditions:

The river stages were about the same as last year. There was no high water this period.

The fluctuation in pool levels due to dam manipulation was not too bad on the Illinois River this spring, but there was a big drawdown on the Bathtown area all winter and part of this spring. Very few ducks used this area on account of the low water.

The comparison of pool levels with same period in 1949 is shown below:

JAN
-
APR
1950

Month	1949			1950		
	High	Low	Difference	High	Low	Difference
January	16.3	14.8	1.5	16.0	15.0	1.0
February	16.4	15.4	1.0	16.0	14.6	1.4
March	16.3	14.5	1.8	16.0	14.8	1.2
April	16.1	15.6	.5	16.9	15.7	1.2

Maximum monthly variation in 1950 was 1.4' compared to 1.8' in 1949. Water levels this year can be considered favorable, with fairly stable conditions obtaining throughout the period.

II. WILDLIFE

A. Migratory Birds:

1. Populations and Behavior:

(a) Waterfowl:

The peak concentration this year was reached in January for the earliest peak recorded in several years. The peak concentration this year was reached on January 23, compared to March 3 in 1949.

January peaks for the past few years show this year's peak of 285,000 to be somewhat ahead of the January 1949 peak of 200,000, and the 110,000 peak in January 1948.

Ducks did not leave the area this year as they have sometimes done in the past. No doubt the open winter influenced birds to remain in the vicinity, for ducks were common in the area throughout the winter.

Duck movements north occurred earlier this year than in the past. This is demonstrated by the earlier peak in January this year compared to March in 1949.

The total duck flight was low this year compared with 1949. During 1949 total waterfowl usage during the period was 384,006, compared to 336,125 during the same period this year.

No lead poisoning losses were noted this year.

(b) Geese:

Canada geese showed a big increase this year over last year. The peak concentration this year was 10,000 compared to

1,082 last year. In 1948 we had 150 using the area. The big concentration of Canada geese only stayed one day, but like the ducks we had not less than 200 Canada geese all winter.

Snow geese showed an increase this year over last year, with a peak concentration of 3,000 this year compared with 2,500 last year and the 1948 total of 500.

Blue geese also increased during the period, with a total of 5,000 compared with last year's 2,500, and 1948's total of 500. Blue and snow geese were here all winter feeding in cornfields adjacent to refuge.

(c) Shorebirds and Other Water Birds:

Wilson snipe are increasing in the area. It is estimated that about 100 went through the area during the period. Killdeer were here in big numbers during the month of February.

Blue heron are low this year. Only 300 are now in the area compared with 2,000 last year at this time.

2. Food and Cover:

Food and cover was very good in this area. Ducks stayed all winter, indicating that there was plenty of food for them. There were more cornfields picked with machines, leaving many times more corn in fields than ducks and geese could use. Low water this year is favorable for a good crop of duck food this year.

D. Fur Animals:

(a) Muskrat:

Musk rats in the closed areas are increasing some, but their habitat is too limited to encourage any big numbers of this species. Outside of the closed areas the trappers took them down pretty close. The muskrat is about the same as last year.

(b) Mink:

Mink signs are showing up very good, and it is thought that a good number were left after the fur season was over. It is estimated they are in numbers about the same as last year.

(c) Skunk:

None of this species were observed during the period. The habitat for skunk in this area is not very good since most of the area is subject to overflow.

(d) Raccoon:

Raccoon signs are general throughout the bottoms, and the low take during the past season is an indication that this species may continue to increase during the coming year.

(e) Beaver:

Beaver signs are showing in most islands along the Mississippi River and the Illinois River. All indications are that this species is on the increase in this area.

E. Predaceous Birds:

Bald eagles were down this year compared with last year. An estimated 60 used the area last year, but only 30 were seen this year. All have left the area now.

Red-tailed hawks are observed daily, and no decided change in this species was observed.

Turkey vultures are observed daily, with an estimated 40 using the area compared with 35 last year.

F. Fish:

Fishing has not really started as yet, but some of the cold weather fishermen have brought in some good catches of crappie and bass. Fishing pressure by pole and line fishermen is increasing. The boat liveries are looking forward to a big season as the State of Illinois has lowered the non-resident license fee to \$2.00.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development:

Nothing to report under this as posting will be done during the next period. The signs went through the winter well as we had no ice and no high water.

VI. PUBLIC RELATIONS

A. Recreational Use:

A goodly number of fishermen used the area the last part of the period, and boating is getting started in the area.

C. Refuge Participation:

The local refuge manager attended the following meetings:

Batchtown Sportsmen's Club in regard to public hunting ground. Mr. Clee and Mr. Thatcher from the State Department were there.

Waterfowl hearing at St. Louis, Missouri, with Dr. Cottan and Mr. Janzen in charge.

E. Fishing:

Commercial fishing was poor during the first part of the period, but during the last part of the period it was good and like last year the market is flooded.

F. Violations:

Illinois

One apprehension for possessing 2 mallard ducks resulted in a fine of \$25.00 and costs of \$4.00 in State court.

One apprehension for possessing 2 mallard ducks resulted in a fine of \$25.00 and costs of \$4.00 in State court.


Superintendent of Refuges

May 3, 1950

WATERFOWL

Refuge Calhoun

Months of January to April 1960

(1) Species Common Name	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I. <u>Swans:</u> Whistling swan									
II. <u>Geese:</u> Canada goose	200	1/3	10,000	3/13	200	3/20			10,000
Cackling goose									
Brant									
White-fronted goose									3,000
Snow goose	100	1/3	3,000	3/20	10	4/13			3,000
Blue goose	400	1/3	2,000	3/20	50	4/13			
III. <u>Ducks:</u> Mallard	10,000	1/3	125,000	3/20	200	4/12			125,000
Black duck	100	1/3	5,000	3/11	100	3/24			5,000
Gadwall	100	3/24	100	3/24	100	3/24			100
Baldpate	100	3/24	100	4/3	100	4/3			100
Pintail	200	1/23	150,000	2/23	1,000	3/24			150,000
Green-winged teal									
Blue-winged teal	25	3/11	5,000	4/10	3,000	4/12			5,000
Cinnamon teal									3,000
Shoveller	300	3/11	3,000	3/20	200	4/12			3,000
Wood duck	100	2/17	200	3/14	100	4/12			200
Redhead	100	2/27	100	2/27	100	3/10			100
Ring-necked duck	200	1/20	3,000	2/13	100	3/11			3,000
Canvas-back	300	1/13	3,000	3/17	1,000	3/20			3,000
Scaup	300	1/3	20,000	3/18	100	4/12			20,000
Golden-eye	200	2/23	300	3/14	10	4/3			300
Buffle-head									
Ruddy duck	20	4/3	25	4/13	25	4/13			25
IV. <u>Coots:</u>	100	3/24	4,000	4/3	1,000	4/12			4,000

SUMMARIES

Total Production:

Geese _____

Ducks _____

Coots _____

Total waterfowl usage during period 1954, 1955

Peak waterfowl numbers 125, 125

Areas used by concentrations Stump, Swan, Gilbert,

Fowler Lake, Cedar Swamp, Illinois River, Dracoor

Principal nesting areas this season _____

Reported by Edward A. Davis

INSTRUCTIONS

(1) Species:

In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.

(2) First Seen:

The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.

(3) Peak Concentra- tions:

The greatest number of the species present in a limited interval of time.

(4) Last Seen:

The last refuge record for the species during the season concerned in the reporting period.

(5) Young Produced:

Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(6) Total:

Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

WATERFOWL

Refuge Bethlehem Months of January to April 1948

(1) Species Common Name	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I. <u>Swans:</u> Whistling swan									
II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose			Due to the drawdown of this pool ducks did not use the area this spring. No good checks were taken.						
III. <u>Ducks:</u> Mallard Black duck Gadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck									
IV. <u>Coots:</u>									

Total Production:

Geese _____

Ducks _____

Coots _____

SUMMARIES

Total waterfowl usage during period _____

Peak waterfowl numbers _____

Areas used by concentrations _____

Principal nesting areas this season _____

Reported by _____

INSTRUCTIONS

(1) Species:

In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.

(2) First Seen:

The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.

(3) Peak Concentra- tions:

The greatest number of the species present in a limited interval of time.

(4) Last Seen:

The last refuge record for the species during the season concerned in the reporting period.

(5) Young Produced:

Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(6) Total:

Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751
Form NR-1
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)

Refuge Calhoun

Months of January to April 1946

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Blue heron	3	1/28	300	4/12	300	4/12				300
Creeper	5	3/28	300	4/12	300	4/12				300

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons: Mourning dove White-winged dove					
IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie Raven Crow	Large number of crows here all the time.				
Reported by Edward A. Davis					

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

Form -2
(April 1946)

UPLAND GAME BIRDS

1613

Refugee Calhoun and Batehorn Months of January to April, 1940

[illegible]

INSTRUCT S

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

SMALL MAMMALS

Refuge Calhoun

Year ending April 30, 1950

* List removals by Predator Animal Hunter

REMARKS:

Reported by

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
 - (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
 - (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
 - (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprime-ness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
 - (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

Total Production:

Geese _____
Ducks 158
Coots _____

SUMMARIES

Total waterfowl usage during period 350
Peak waterfowl numbers 350
Areas used by concentrations scattered over area

Principal nesting areas this season well scattered over
area

Reported by E. V. Pierce

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First Seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak Concentrations: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young Produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751
Form NR-1
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)

Refuge...Kaithsburg... Months of...April 11 to...August 8, 1945.

MIGRATORY BIRDS (Other than waterfowl)

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Great blue heron	here		25	8/8						25
Cormorant	here		20	4/11	6	8/8				20
American egret	4	6/15	40	8/8						40
</										

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons:					
Mourning dove	here	60	8/1	60	8/8
White-winged dove				8	32
IV. Predaceous Birds:					
Golden eagle					
Duck hawk	here	6	8/8		6
Horned owl					
Magpie					
Raven	here	200	8/8		80
Crow					200
Reported by..... E. V. Pierce					

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1752
Form 1-2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Keithsburg Months of April 11- to August 8, 1945

UPLAND GAME BIRDS

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs.'v'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Bob-white quail	Approx. 200 acres farmland, 200 acres reverting farmland, 100 acres brush and slough margin	25							20	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

1950

CALHOUN AND BATHTOWN REFUGES
NARRATIVE REPORT
MAY, JUNE, JULY, AUGUST, 1950

I. GENERAL

A. Weather Conditions:

This was a cooler summer than in 1949, with minimum temperatures lower in every month during the period. Nights were very cool compared with the same time last year. Rainfall for the period was 5.81" compared with 18.11" last year. It was much drier in June, July, and August. Relative readings are shown below:

Month	Year	Maximum	Minimum	Precipitation
May	1949	92	43	3.26
	1950	92	41	3.03
June	1949	94	53	7.30
	1950	97	50	2.00
July	1949	99	61	7.36
	1950	93	50	.47
August	1949	96	57	.19
	1950	88	53	.31
1949 Totals				18.11
1950 Totals				5.81

B. Water Conditions:

The river stages were higher this year compared with 1949. Two periods of high water occurred in May and June, causing some damage to farmers along the low areas. High water caused a delay in development of waterfowl foods along the river.

The high reading for the summer of 1949 was 16.1 compared to 19.0' this season.

Fluctuating pool levels due to dam manipulations was about the same as last year. Lots of complaints were heard from fishermen. The low water during July and August has favored plant life and the prospects look very good.

The comparison of pool levels with the same period in 1949 is shown below:

MAY
-
AUG
1950

Month	1949			1950		
	High	Low	Difference	High	Low	Difference
May	15.5	14.6	.9	18.6	15.6	3.0
June	15.8	14.8	1.0	19.0	15.3	3.7
July	16.1	14.9	1.2	15.8	14.9	.9
August	15.9	14.8	1.1	15.6	15.0	.6

Maximum monthly variation in 1949 was 4.2 compared with 8.2 this year. Water levels this year can be considered favorable, with fairly stable conditions during July and August.

II. WILDLIFE

A. Migratory Birds:

1. Populations and Behavior:

(a) Waterfowl:

Teal, scaup, and most mallards remained in the area until late in May. All that remained during the summer months were wood ducks, with a very few mallards. Wood ducks were fewer than last year, both as to adults remaining and young produced. This year a total of 47 wood duck broods were seen, with 491 young. In 1949 a total of 89 broods were seen, having 837 young.

Only one brood of mallards was observed this year, with 6 young. In 1949 three broods, having 29 young, were seen. This difference is so slight as to be insignificant, however.

A comparison of the breeding seasons of 1949 and 1950 is shown in the following table:

Species	Broods Seen		Young Seen	
	1949	1950	1949	1950
Wood duck	89	47	837	491
Mallards	3	1	29	6
Totals	92	48	866	497

(b) Geese:

Geese had left the area by the beginning of this report period.

(c) Swans:

No swans were observed during the period.

(d) Egrets:

Egrets are present in the area in fairly good numbers, although much reduced over last year. An estimated 600 are now using the area, while in the 1949 season 1600 were found. No egrets were observed nesting in the district this year, while in the past nesting has occurred commonly. Last year 75 nested here.

(e) Shorebirds:

A goodly number of shorebirds were observed during the early part of the period. Wilson snipe were about the same as last year, but killdeer showed a definite increase.

(f) Other Water Birds:

Great blue herons showed a decrease this year, with only an estimated 150 in the area, compared to 221 in 1949. None were observed nesting here this season, although they normally are common nesters. Last year 100 nested here.

2. Food and Cover:

Food and cover looks very good in all the areas. American pondweed has come in better than ever this year, and big beds of it are found in the Swan Lake and Stump Lake areas. Pond lily in Stump Lake has made good growth. Sago is looking good in Pool 26, while sagittaria has made good growth along the river margins.

In the Bathtown area vegetation was slow in starting due to prolonged high water, but, while late, it is expected to mature to the point where it will equal last year. Smartweeds with some millet makes up the bulk of food in this portion of the district.

B. Upland Game Birds:

None were observed on refuge land as areas are mostly water and marsh, with little upland habitat.

C. Big Game Animals:

Two deer were observed on Portage Island, and two on the west side of Swan Lake. This is the first time deer have been seen in this area in recent years.

D. Fur Animals:
(a) Muskrats:

Muskrat signs are about the same as last year, and no decided change in this species is noted.

(b) Mink:

Several litters of mink have been observed this summer. This species is showing some increase.

(c) Skunk:

No signs of skunk have been seen on the refuge this year.

(d) Beaver:

Beaver are on the increase in this area. Signs are showing up on many of the islands on the Mississippi and the Illinois Rivers. Most of them are bank beaver.

(e) Otter:

None have been observed here.

(f) Raccoon:

Raccoon sign is general throughout the area, and the general opinion is that this species is still on the increase. Several have been observed during the day.

(g) Foxes:

Foxes are here in big numbers. Many complaints are received from farmers losing poultry. The county is still paying bounty on them.

E. Predaceous Birds:

Red-tailed hawks are observed almost every day. It is believed this species is about the same as last year.

Turkey vultures showed some increase. Forty were seen this year, compared to 29 last year.

F. Fish:

In the early part of the period fishing was fair. It has been spotty all summer, with some good catches of crapple

and bluegill observed. Bass fishing was poor all summer, with no good catches observed. Fishing pressure is continually increasing in this area, and boat liveries have enjoyed a good business this summer.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development:

A new closed area was posted on Portage Island and its towheads during this period. The Gilbert Lake, Swan Lake, and the Batchtown closed areas have all been reconditioned. Closed area lines required considerable brushing this summer, but no signs were lost in the areas. The closed area boundary lines will be checked shortly before the hunting season to make sure that all signs are in place and in good condition.

Boat 628 was painted and repair was made on one bad rib. The 21 foot boat was painted early this spring, and last part of July it was painted again.

B. Plantings:

4. Cultivated Crops:

Eight permits for sharecropping were issued during the period as follows:

Permittee	Address	Acres	Use
John Sherman	Grafton, Ill.	30	corn
August Toppmeyer	Deer Plain, Ill.	10	beans
Robert La Marsh	Deer Plain, Ill.	6	beans
Henry C. Weigal	Golden Eagle, Ill.	20	corn
W. F. Duncan	Grafton, Ill.	6	corn
H. G. Binslager	Golden Eagle, Ill.	80	corn, beans
Joehavarre	Deer Plain, Ill.	6	corn
John Held	Brussels, Ill.	8	beans

There are not very good prospects for a good crop as farmers were held up due to the high water in June and all crops were late.

VI. PUBLIC RELATIONS

A. Recreational Use:

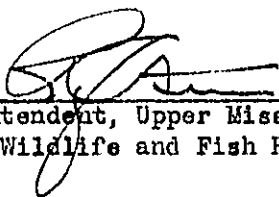
A lot of camping, fishing, boating, swimming, and picnicking was done on both the Illinois and Mississippi Rivers during the period. Pleasure boating is increasing on Pool 26, with many new boats appearing this year.

E. Fishing:
1. Sport:

A lot more fishermen used the area this year, but their success was not as good as last year. The bulk of the catches were crappie and blue gill. Bass fishing was not good.

2. Commercial:

Commercial fishing has been good throughout the period, and lots of it goes on in this area. Catfish are more plentiful this year and are bringing a good price.



Superintendent, Upper Mississippi
River Wildlife and Fish Refuge.

September 1, 1950.

Approved SEP 6 1950
(Date)

Regional Director

WATERFOWL

Refuge: Calhoun, Batshtown Months of May to August, 1946

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I. Swans: Whistling swan									
II. Geese: Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose									
III. Ducks: Mallard Black duck Caddwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	6	7/5	6	7/5	6	7/5	1	6	6
	6	6/5	491	7/7	4	8/8	47	491	491
IV. Coots:									

SUMMARIES

Total Production:

Geese

Ducks 497

Coots

Total waterfowl usage during period 550

Peak waterfowl numbers 550

Areas used by concentrations Pools 26 and 25

Principal nesting areas this season Above Hatchtown
closed area.

Reported by Edward A. Davis

INSTRUCTIONS

(1) Species:

In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.

(2) First Seen:

The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.

(3) Peak Concentra- tions:

The greatest number of the species present in a limited interval of time.

(4) Last Seen:

The last refuge record for the species during the season concerned in the reporting period.

(5) Young Produced:

Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(6) Total:

Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

3-1751
Form NR-1
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)

Refuge Calhoun, Batchtown

Months of May to August, 1950

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Blue heron	3	5/2	150	8/10	20	8/11				
Egrets	3	5/2	600	8/10	600	8/11				

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons: Mourning dove White-winged dove IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie Raven Crow	here all year				10,000
Reported by... Edward A. Davis.....					

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1752
Form 2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Calhoun, Hatchtown Months of May to August, 1945

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge Pertinent information not specifically requested. List introductions here.
Nothing to report under this.						

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

P/50

CALHOUN AND BATHTOWN REFUGES
NARRATIVE REPORT
SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER, 1950

I. GENERAL

A. Weather Conditions:

The maximum temperature during this period was higher in every month except December, 1949. The minimum temperature was lower in every month except October, 1949. Rainfall was 4.63 less this period, compared with the same period last year.

Relative readings are shown below:

Month	Year	Maximum	Minimum	Precipitation
September	1949	89	39	3.51
	1950	91	36	1.77
October	1949	87	29	6.22
	1950	90	35	.98
November	1949	80	21	trace
	1950	88	3	2.69
December	1949	70	15	1.14
	1950	68	2	.80
1949 Total				10.87
1950 Total				6.24

B. Water Conditions:

River stages were about the same as last year, with no big changes occurring during the period. Fluctuations this year happened during the first of the week instead of week-ends, as was the case last year. This was better for fishermen, but hunters complained as usual.

The comparison of pools with the same period in 1949 is shown below:

Month	Year	High	Low	Difference
September	1949	15.3	14.4	.9
	1950	15.4	14.0	1.4
October	1949	15.5	14.4	1.1
	1950	15.4	14.6	.8
November	1949	15.2	14.5	.7
	1950	15.1	14.5	.6
December	1949	15.2	14.4	.8
	1950	15.1	14.3	.8



Maximum monthly variation in 1950 was 1.4, compared with 1.1 in 1949.

II. WILDLIFE

A. Migratory Birds:

1. Populations and Behavior:

(a) Waterfowl:

Ducks started to come into the area on September 11 in fair numbers. Blue-wing teal were here in good numbers by August 23, which was earlier than usual. Some pintail showed up on September 20, and the peak concentration occurred November 19, compared with December 13 last year. The peak concentration last year was 400,000, compared with this year's peak concentration of 150,000. This year we had two cold waves during the hunting season, and ducks were pushed out and did not pile up in refuge areas as in other years. The Batchtown area peak concentration was 79,400, compared with last year's peak of 100,000. Ducks did not feed in cornfields as much as last year, and those that did would not come out until after shooting hours. Hunters complained that ducks were harder to decoy this year.

(b) Geese:

Canada geese started to come into refuge areas on October 9, compared with September 6. Last year's peak was on September 20, with 500, compared with this year's peak of 200 on November 12.

Blue and snow geese showed a decrease this year, with a peak concentration of 4,000 birds on November 12, compared with last year with 10,000 birds on December 13. By December 7 all geese had left the area.

(c) Swans:

None were observed.

(d) Egrets:

Egrets were here in goodly numbers during the early fall. The peak concentration was August 23, with about 800 birds in the area. Soon after the hunting season opened up, most all birds pulled out. I would say that egrets are increasing in this area.

(e) Shorebirds and Other Water Birds:

Wilson snipe seem to be down some this year, when not as many were observed as last year. Last year 100 were observed, compared with 50 this year. Killdeer showed some increase over last year, and about 400 were seen.

2. Food and Cover:

Food and cover was about the same as last year in both areas. There were ample amounts present for the season was short; that is, the concentration of ducks using the closed areas lasted a shorter period compared with other years due to the cold waves during the period. Ducks did not use cornfields as much as last year, indicating that they were getting feed on the refuges. There should be plenty for the spring flight.

B. Upland Game Birds:

No upland game birds are present on either the Calhoun or Batchtown areas.

There is ample food and cover present on both areas to sustain fair numbers of upland game, but for some reason none of these birds use the areas.

C. Big Game Animals:

No big game animals are present on either area.

D. Fur Animals:

(a) Muskrats:

Muskrats have increased some in the areas, but the limited habitat area is not conducive to much of an increase in muskrats.

(b) Mink:

Trappers that trap in open areas say mink are about the same as last year. Some have been caught, but most all lakes are frozen up, and trappers report that there will be plenty left after this season.

(c) Skunk:

No sign of this species is noted in refuge areas as the land is too low for dens.

(d) Beaver:

It is thought that beaver are increasing in this area. There are signs of them on most islands along the Mississippi and Illinois Rivers.

(e) Otter:

None here.

(f) Raccoon:

A good number of raccoon are being caught along the Illinois and Mississippi Rivers. Trappers say they don't want them, but when they set traps for mink they got a raccoon. Raccoon appear to be holding strong compared with last year.

(g) Foxes:

Foxes are about the same as last year, and are plentiful in all areas.

(h) Others:

Nothing under this.

E. Predaceous Birds:

Eagles were here in good numbers, and about the same numbers were observed as last year. It is estimated that 25 are present. Hawks are about the same as last year. Red-tailed are observed almost every day. I would say this species is holding its own. Owls in the timbered areas were more plentiful than last year.

F. Fish:

Fishing was a little better than last year and goodly number of crappie, bluegill, and bass were taken. Fishing pressure was greater this year than last year. All boat liv-eries had a good year.

IV. ECONOMIC USE OF REFUGE

E. Other Uses:

Eight permittees for sharecropping report results as follows:

Permittee	Permit	Acres	Permittee share	Govt. share
John Sherman	113	30 corn	360	120 left-field
W.F.Duncan	110	6 corn	120	60 left-field
John Held	159	8 beans	23.49	7.83 sold
August Toppmeyer	158	10 beans	120	40 sold
Henry C. Weigel	112	20 corn	375	125 sold
Joe Navarro	114	6 corn, not through yet		
Robert La Marsh	111	6 beans, not through yet		
Harry G. Binslager	160	80 beans & corn, not through yet		
Total permittees share corn			855	180 left-field
Total permittees share beans			143.49	172.83 sold

The Government's share was sold for \$210.95 and money orders were sent to the Winona office.

VI. PUBLIC RELATIONS

A. Recreational Uses:

Lots of boating and picnicking was observed on the Mississippi and Illinois Rivers. A lot of fishing was also done on these rivers this fall, with fair results.

B. Refuge Visitors:

Dr. W. E. Green was here during the first few days of the hunting season, checking on hunting pressure and making bag checks.

C. Refuge Participation:

On October 17 the Refuge Manager attended a conference with War Department and Fish and Wildlife Service personnel from the main office, Mr. Steele from the Winona office, and Regional Office personnel.

D. Hunting:

The hunting was not so good this year due to two cold waves that kept the lakes frozen up about two weeks. This kept a lot of hunters out of the field. The last two weeks of hunting was confined to the river channel. The total number of hunters in all the areas checked was 8059, compared with 8695 last year. The total number of ducks killed this year was 8999, compared with last year's 12,905.

Duck kill checks are shown below:

Batohtown Area

Hunters in field	1512
Hunters checked.	1512
Ducks in bag checked	2189
Av. ducks in bag	1.4
Total ducks killed in area	2189

Stump Lake Area

Hunters in field	5992
Hunters checked.	1419
No. ducks checked.	1409
Av. bag per hunter	0.99
Estimated total killed	5931

Diamond Island

No. hunters in area	184
No. hunters checked	184
No. ducks checked	257
Av. bag per hunter.	1.3
Estimated total kill.	257

Reds Landing Club-Blackwell

No. hunters in area	106
No. hunters checked	106
No. ducks checked	202
Av. bag per hunter.	1.9
Estimated total kill.	202

Gilead Club

No. hunters in area	68
No. hunters checked	68
No. ducks checked	200
Av. bag per hunter.	2.9
Estimated total kill.	200

Bachelor Club (south of Gilead Club)

No. hunters in area 197
No. hunters checked 197
No. ducks checked 220
Av. bag per hunter. 1.1
Estimated total kill. 220


E. Fishing:

Bass, crappies and bluegill were fair through the fall up to November 3. Most fishing stopped then.

Commercial fishing was just fair this fall, with no big catches reported. Most of them have quit for winter as there is too much ice.

F. Violations:

Two cases were turned over to State wardens and settled in State court. Total fines were \$50.00, with costs of \$8.00.



Superintendent of Refuges

January 10, 1951

Approved January 12, 1951
(Date)

Acting Regional Director

WATERFOWL

Refuge

Calhoun

Months

September

to December, 19 50

(1) Species Common Name	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. Swans: Whistling swan									
II. Geese:									
Canada goose	15	10/9	200	11/12	100	12/1			250
Cackling goose									
Brant									
White-fronted goose	10	10/9	2,000	11/12	2,000	12/1			2,500
Snow goose	10	10/9	2,000	11/12	2,000	12/1			2,500
Blue goose									
III. Ducks:									
Mallard	25	9/18	136,000	11/19	99,000	12/1			187,600
Black duck	100	10/8	1,000	11/12	200	12/1			2,000
Gadwall	25	10/9	200	11/12	200	11/12			500
Baldpate	500	9/20	2,000	11/8	2,000	11/29			3,000
Pintail	20	9/20	10,000	11/12	250	12/1			15,000
Green-winged teal	150	10/30	000	11/19	100	12/1			1,000
Blue-winged teal	500	8/23	6,000	10/9	50	11/12			10,000
Cinnamon teal									
Shoveller									
Wood duck	2,000	8/23	2,000	8/23	25	11/12			2,500
Redhead									
Ring-necked duck									
Canvas-back	50	12/1	50	12/1	50	12/1			100
Scaup	200	10/30	5,000	11/19	100	12/1			10,000
Golden-eye	100	10/1	100	12/1	100	12/1			150
Buffle-head									
Ruddy duck	25	10/16	100	11/3	100	11/3			150
IV. Coot:	2,000	10/9	7,000	10/16	150	11/19			9,000

3-1750

(over)

(Sept. 1950) Interior - Duplicating Section, Washington, D.C. 82449

Form NR-1

SUMMARIES

Dates waterfowl counts made _____	Total waterfowl usage during period <u>237,250</u>
Percent of waterfowl area covered _____	Peak waterfowl numbers <u>167,250</u>
Dates brood counts made _____	Areas used by concentrations <u>Swan and Gilbert Lakes</u>
Percent of area covered in brood counts _____	Principal nesting areas this season _____
Total production:	
Geese _____	
Ducks _____	
Coots _____	Reported by <u>Edward A. Davis</u>

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these are necessarily based on an analysis of the rest of the form.

WATERFOWL

Refuge Batchelor Months September to December, 19 50

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. <u>Swans:</u> Whistling swan									
II. <u>Geese:</u> Canada goose Cackling goose Brant White-fronted goose Snow goose Blue goose	100	10/27	100	10/27	100	10/27			100
III. <u>Ducks:</u> Mallard Black duck Cadwall Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck	25 1,000 20 200 100 300 3,000 500 200	9/12 10/27 10/9 10/9 10/9 11/2 10/9 8/23 11/2	20,000 1,000 100 4,000 50,000 500 3,000 500 200	11/2 10/27 11/2 11/2 11/2 11/17 10/9 8/23 11/14	3,000 50 100 300 3,000 500 100 10 50	11/17 11/17 11/2 11/17 11/17 11/17 11/2 11/14 11/17			20,000 1,000 100 4,000 50,000 500 3,000 500 200
IV. <u>Coot:</u>	500	10/9	5,000	11/2	100	11/14			5,000

3-1750

(Sept. 1950) Interior - Duplicating Section, Washington, D.C. 82449

(over)

Form NR-1

SUMMARIES

Dates waterfowl counts made _____ Total waterfowl usage during period 79,400
Percent of waterfowl area covered _____ Peak waterfowl numbers 79,400
Dates brood counts made _____ Areas used by concentrations Batchtown closed area
Percent of area covered in brood counts _____
Total production: _____
Principal nesting areas this season _____
Geese _____
Ducks _____
Coots _____
Reported by Edward A. Davis

INSTRUCTIONS

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
- (2) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: The greatest number of the species present in a limited interval of time.
- (4) Last seen: The last refuge record for the species during the season concerned in the reporting period.
- (5) Young produced: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these are necessarily based on an analysis of the rest of the form.

3-1751

Form NR-1
(Nov. 1945)MIGRATORY BIRDS
(Other than waterfowl)Refuge CalhounMonths of September to December, 1950

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Blue heron	180	8/23	180	8/23	1	12/1				
Egrets	100	8/14	800	8/23	10	11/4				
Cormorants	20	10/1	500	11/4	3	11/20				

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons: Mourning dove White-winged dove					
IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie Raven Crow	here all year around				
Reported by.....					

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

1613

Refuge Calhoun Months of September to December, 1940

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
	Nothing to report under this.									

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

Form NF

BIG O 3

Refuge CalhounYear 1945

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population as of Dec. 31	(8) Sex Ratio
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Losses	Number	Source		Percentage
	Nothing to report under this.												

INSTRUCTIONS

Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.) exclusive of fenced herds. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated total number of young produced on refuge.
- (4) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE POPULATION: Give the estimated population of each species on the refuge as of December 31.
- (8) SEX RATION: Indicate the percentage of males and females of each species as determined from field observations or through removals.

Refuge CalhounYear 1948

Botulism

Lead Poisoning or other Disease

Period of outbreak _____

Period of heaviest losses _____

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Areas affected (location and approximate acreage) _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.) _____

Condition of vegetation and invertebrate life _____

Remarks _____

Kind of disease _____

Species affected _____

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks None observed as yet.

FISH

Refuge Calbourn

Year 19~~50~~

1617

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
Nothing to report under this.								
REMARKS:								

REMARKS:

Form R-7

PLANTINGS
(Marsh - Aquatic - Upland)Refuge CalhounYear 1945

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Plant- ing	Survival	Cause. of Loss	Remarks
	Nothing to report under this.							

TOTAL ACREAGE PLANTED:

Marsh and aquatic _____
Hedgerows, cover patches _____
Food strips, food patches _____
Forest plantings _____

3-1758
Form NR-8
(April 1946)

CORRECTED REPORT

CULTIVATED CROPS

Refuge Calhoun - Lower Pools Year 1946

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
John Sherman	112	30 acres	corn	16		300				120	
W. F. Dumas	110	6 acres	corn	30		180				60	
John Held	159	8 acres	beans	4		23.49		7.83			
August Topmeyer	158	10 acres	beans	16		120		40			
Henry C. Weigel	112	20 acres	corn	28		575		125			
Joe Navarro	114	6 acres	corn	Not through yet							
Robert La Marsh	111	6 acres	beans	Not through yet							
Harry G. Bisslager	160	38 acres	beans	Not through yet							
		42 acres	corn								

Summary of Crops Grown:	Crop	Acreage	Permittee's Share		Government's Share				Total Revenue
			Acres	Bushels	Harvested		Unharvested		
					Acres	Bu.	Acres	Bu.	
	Corn	104*		856		125		180	\$ 210.95
	Soybeans	62*		143.49		47.83			
* 48 acres corn and 44 acres beans not harvested as of end of year. Yield figures not included above.									

\$ 210.95

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

Use or Location - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, brome grass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. Unharvested - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the Bushels column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

COLLECTION AND RECEIPTS OF PLANTING STOCK
(Seeds, rootstocks, trees, shrubs)

Refuge Calhoun Year 1940

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
	Nothing to report under this.							

HAYING AND GRAZING

Refuge...Calhoun

Year 1945

[illegible]

Totals:

Acreage grazed.....	Animal use months.....	Total income Grazing.....
Acreage out for hay.....	Tons of hay out.....	Total income Haying.....

TIMBER REMOVAL

Refuge.....Calhoun

Year 19450.

[illegible]

Total acreage cut over.....

Total income.....

No. of units removed B. F.....
Cords.....
Ties.....

Method of slash disposal.....